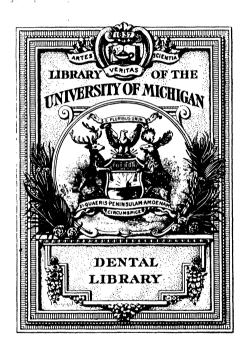
AMERICAN DENTAL JOURNAL

7 1908







A464





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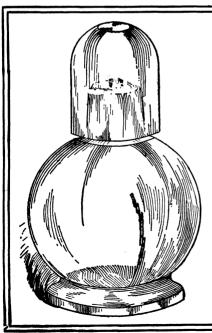
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A fourth of a century of continued, satisfactory employment of Listerine has demonstrated to many who have used it during this entire period, that Listerine is the best antiseptic for daily employment in the care and preservation of the teeth. Listerine Tooth Powder, then, is not intended to supplant Listerine in the daily toilet of the teeth, but is offered in response to a popular demand for a frictionary dentifrice to be used in conjunction with this well-known and time-tried antiseptic.

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PORCELAIN.

T. ELHANAN POWELL, D. D. S

CHAPTER IX.

In the last two articles on Porcelain it is evident that someone has worked while dreaming or dreamed while working. Fig. F in



Fig. G.

November article should have been shown in October article in connection with the text which also was lost in the shuffle. Fig. F is for a proximal restoration which form of cavity is very popular with our best porcelain workers.

Where the decay is deep seated and the enamel broken down lingually, this cavity may be prepared without sacrificing the buccal wall, and the inlay may be prepared and set with very little separation.

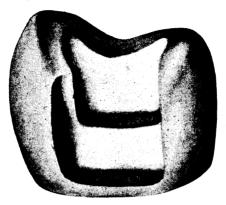


Fig. L.

The cavity is squared rootwise both bucally and lingually; grooved inciso-gingivally toward the buccal wall and again, in the lingual aspect toward the buccal wall. The outline of the cavity

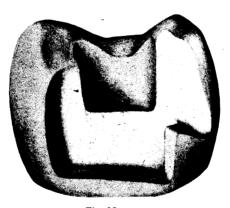
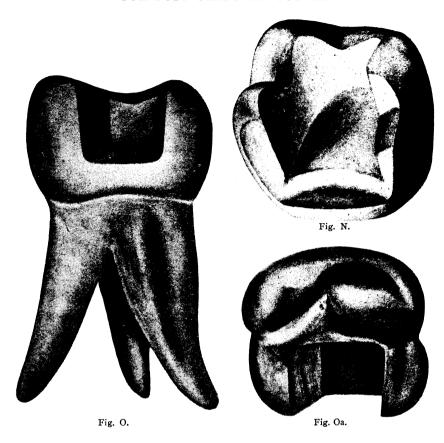


Fig. M.

may be gracefully curved giving an oval form. This form of cavity is preferable to the other proximal forms when indicated.

In the November issue is shown in Fig. G-a proximal cavity



when the text describes a proximo incisal cavity. We here show the form of cavity that should have been shown in the November article as Fig. G—and repeat the text.

In Fig. G such a cavity is shown prepared with a fairly square base toward the gingival just sufficiently rounded to make the adaptation of the matrix comparatively easy. Then, with a cork-shaped bur, a deep seat is made in the direction of the pulp, gradually sloping toward the incisal end.

Usually, the square seat toward the gingival is as wide mesiodistally as the length of the restoration at the cutting edge. This seat in connection with the depth, pulpwise, makes a retention which is usually adequate. The next series of cavities to be dealt with is proximo occlusal in bicuspids and molars. Very often it is advisable to make porcelain fillings in bicuspids, but they are usually contraindicated in molars; however, our porcelain enthusiasts would advocate their use whenever a filling of any description is indicated. In my own practice, I usually choose gold inlays back of the first bicuspids, except in rare instances where the second bicuspids are very conspicuous.

In Fig. L is shown proximo occlusal cavity in a first bicuspid where the decay has undermined the occlusal to such an extent that the central grooves had to be cut away extensively toward the mesial. Bucco-lingually, we find extension for prevention with a straight wall toward the lingual with the buccal slightly grooved.

The gingival base squared but slightly depressed toward the mesial; then the occlusal portion of the cavity is also squared dipping pulpwise toward the mesial. This gives a form of cavity whose retention is materially aided by the force of mastication.

Fig. M.—In Fig. M is seen a proximal occlusal cavity in a second bicuspid with a mesial aspect. Extensive decay has necessitated the cutting away of a portion of the buccal wall. The general form of the cavity is the same as in Fig. L, except the step in the buccal wall.

These steps are inclined pulpo-distally making a lock form of cavity which with the flaring shape of the cavity in the occlusal surface makes a very safe retention.

Fig. N.—In Fig. N is shown the preparation of a cavity in a molar. The gingival step is square and wide; the lingual wall which is broken down is squared. In the occluso-mesial part of the cavity the floor is flat and the walls of the cavity widened bucco-lingually toward the mesial.

The buccal wall of the cavity is wider toward the pulp than it is at the occlusal surface. This form of cavity admits of sufficient thickness in the porcelain to resist the force of mastication. In drawing the matrix from this form of cavity, it would have to be lifted from the lingual on account of the groove in the buccal wall.

Where there is a deep cavity in the proximal surface of a molar it is well to make a square shaped cavity extending through to the occlusal as indicated in Fig. O. The floor of the cavity squared with a slight gradual incline in the walls of the cavity widening toward the occlusal. Of course we should have extension

for prevention getting down toward the gingival sufficiently to get the gingival margin beyond the contact.

Porcelain being friable and liable to fracture when brought in contact with the force of mastication, the cavity should be made deep enough to give considerable thickness of porcelain. Fig. Oa gives the occlusal view of this cavity.

(To be continued.)

COCAINE AND ADRENALIN.

Since the introduction of the cocaine-adrenalin combination for the purpose of mitigating pain in operative dentistry, local anesthesia has achieved results which, considering its safety and reliability, cannot be obtained with cocaine or any of its substitutes. From our investigations into the nature of the above combination, we are convinced that it is the safest and most effective means of producing local anesthesia upon a rational basis so far known.—Stomatalogist. (Some practitioners dissent from this assertion.—Ed. Stomatalogist.)

NEW FORM OF LOCAL ANESTHESIA.

Permit me to call attention to a very interesting feature connected with the tablet used in the production of the Abbot-Lamphear form of anesthesia. The formula of this is:

Chemically pure hyoscine hydrobromide.....gr. 1-100 Chemically pure morphine hydrobromide....gr. 1-4 Cactin (from cactus grandflorus)......gr. 1-67

It is essential that the hyoscine be free from apoatropine and atroscine—because it has been shown that commercial "scopolamine" (chemically identical with hyoscine) is dangerous as well as ineffective when its optical rotation is less than minus 10 degrees; that is, it is, not strongly lævorotatory when there is present much apoatropine; so a preparation from a reliable manufacturer only must be employed. The nearer the hyoscine is to minus 20 degrees in its optical rotation the better and safer the drug.—Critic and Guide.

OPERATIVE DENTISTRY.

BY R. B. TULLER, D. D. S.,
CLINICAL PROFESSOR OF OPERATIVE DENTISTRY, CHICAGO COLLEGE
OF DENTAL SURGERY.

EXTRAORDINARY AND EMERGENT OPERATIONS.

Many and many are the occasions where a dentist must be an inventor and devise ways and means to accomplish certain things not described in any text books, nor taught by any precedent. In fact, as no two mouths are just alike, nor conditions the same, there is something possibly in every operation that calls forth some effort not quite like any preceding experience, and often widely differing, and, therefore, such operations are extraordinary.

There are a certain class of emergencies that an operator should be pretty well prepared for, but there are, of course, others that one could not be fully prepared for; that is, to be able to afford prompt remedy except, possibly, in a temporary makeshift.

Some of my own personal experiences may be of value. Early in my practice I was called upon about two o'clock one morning by a frightened M. D. to see if I could stop a case of hemorrhage that was just ebbing away the life of a young lady about twenty years of age. Early in the evening she had gone to this physician to have a lower bicuspid extracted, as the doctor lived just across the street, and the family thought he probably knew as much or more than a dentist about extracting; and they also did not place much value on The physician did not hesitate to take the case, and he promptly broke off the tooth. He then went after the root, just how I do not know, but he succeeded in badly shattering the process and wounding the inferior dental artery or a small branch. This was not apparent at first, and, in fact, not until the young lady had retired. They sent over for the doctor, and he realized that arterial blood was flowing pretty freely. He immediately got a piece of leather and scraped a handful of leather shavings. He put a wad of these, about the size of an English walnut, in that side of her mouth and had her close her teeth on it.

As this had little effect in checking the flow, he saturated this

bolus plentifully with persulphate of iron, and when this failed and the young lady was going pretty fast, he came rushing after me. While I hurriedly got on my clothes and selected some things needed he gave me a history of the case.

When I got into the room the young lady had fainted, and while the doctor applied restoratives I removed all that leather, located the place where the tooth had been taken out, made a cone of cotton to go down into the socket and, knowing nothing better and having nothing better, I saturated the cotton with the persulphate of iron. This I forced into the wound and held it with my finger, my thumb making a firm grip under the jaw. In a moment I realized that the flow was checked, and, still maintaining my grip, I syringed out the mouth several times, with the result that after a little the water was quite clear. I then simply sat and held down the cotton for two hours, fearing to take off the pressure. By that time the face that had become as white as snow began to take on color and sleep ensued. Before leaving I put in a ball of cotton on top of the plug, closed the jaws on it and tied it up very firmly with a handkerchief over top of head. This remained until the middle of the day following, but the plug was retained in place much longer. There was no recurrence of hemorrhage.

In a small place the incident and narrow escape was soon known and was worth much to me in establishing confidence in my ability, though the M. D. did not take too much trouble to give me credit. He said that I used the same remedy as himself, but I happened to get it on the right spot. He had the "remedy" all over the mouth, making the mucous membrane looked like black tanned leather, withered and puckered, and more like a leather purse than a mouth.

A few years ago a boy of about thirteen came to me within three minutes after having a central incisor knocked squarely off, accidentally, with a "shinny" stick in the hands of a playmate. I found the pulp protruding from the stump and entirely benumbed by the shock, so that I had it out on a broach in a moment, with no pain, and an antiseptic dressing adjusted. Then the boy began to dread facing his mother with a front tooth gone. He knew she would have a fit, he said, and asked if I could not put one on immediately. In my own mind I had determined on making the repair with a Logan crown, but I did not have one in stock that would answer at all. I

found, however, a rubber pinned tooth that was a very perfect match. To this I soldered a pin with soft solder, and with gutta percha I adjusted it to the root so that it was not a bit noticeable, and the boy passed inspection at home until he had an opportunity to break the unfortunate news without too much shock to his family. A few days later a Logan was adjusted; that boy (now a married man) says it is so like his own teeth that he can not observe any difference. Not yet has there been recession of the surrounding gum enough to expose the joining, and it has a perfectly normal appearance.

The use of a facing or a rubber tooth may frequently be made to do service temporarily by soldering on, with soft solder, a bit of German silver wire. Shape this pin to fit pretty snugly, so that it may stay in root without gutta percha, using the latter, however, to fill up space and give a comfortable feeling to the tongue by molding nicely lingually and remove surplus that might be annoying in feeling or appearance. Such a temporary crown has been worn a week or two with comfort and satisfaction. Even on roots that I am treating I frequently adjust such a crown, or, since replaceable crowns are to be had so easily, where one is near a supply house, if he has not one in stock, I use those in preference, removing easily as often as needed for treatment. People generally, and particularly ladies, dislike very much to be seen with a tooth missing when it can be obviated, whether it be a natural tooth just extracted or a broken plate or bridge tooth.

Our patients are sometimes inventive, and some years ago a lady taught me that a bit of gum mastic may be effectively used to hide a defect or space temporarily and for appearance sake. Where a bridge tooth had broken off she had attached the mastic, molding it into the resemblance of a tooth so nicely that a casual observer would note no defect. Of course this would not last through any attempt at mastication, but in white gutta percha we have a tough enough substance, if firmly attached, to stand some wear. This substance, however, has no such translucent appearance as mastic.

For appearance sake I know of a diatoric tooth being used once to temporarily fill the space where a bicuspid root that held a crown had split and had to be extracted. Utilizing the holes, the diatoric was swung into place with ligatures (or a wire), attaching it to adjoining teeth. It held the place until it was convenient to make the substantial repair.

Recently a lady came to me with a bridge which carried the incisors and was swung by slipper bands on the cuspids, which had always been objectionable in appearance, and at length decay at the necks of cuspids made removal necessary.

The problem was to remove the old and adjust a new bridge with Richmond crown supports without "my lady" appearing outside my office at any time without teeth. This is the way it was done:

First, the pulps of the two cuspid were removed by opening directly in axial line and the use of cocaine. Later the roots were filled at the apical ends, then with a small bur the teeth were cut off at the gum line, thus taking away the bridge with the two cuspids in their bands. Into these cuspid crowns wires were inserted which served as dowels. The work of shaping roots and fitting caps and pins was then proceeded with, and impression and bite taken, as usual.

Before dismissing the patient the old bridge was set back in place by using gutta percha, and was used as well as ever until the next sitting, and again during another interval, without members of the family (the children) observing any change. When the new bridge was ready the change was made, the only thing noticeable to familiars or acquaintances thereafter being a very much improved appearance, but at no time had she to go without teeth.

In other cases a temporary plate may be made to do duty for a few days. In some instances a plate of gutta percha may be made. If of vulcanite, the impression is taken before removing any teeth, and they are then broken off the plaster cast, enabling the operator to have a plate ready to put in as soon as the others are out of the way.

In one instance a lateral incisor that had carried a Logan crown for years split and then became abscessed. The root fragments were removed, a gutta percha plate was made with a reinforcement of thin perforated aluminum, which permitted of shaping approximately well by hand, and this gave considerable rigidity; gutta percha was molded on either side. This eventually was fitted to the roof of the mouth by simply warming and pressing up with the fingers. A long pinned tooth with pins bent to make it hold was then adjusted in its place and as soon as ordinary temperature was reached, it was a fairly rigid and serviceable plate, good for several days, when with a

Carmichael attachment on the adjoining cuspid a dummy was swung in with no exposure of gold from ordinary observation.

In some cases of root splitting, the fracture comes out at the side well up under the gum, but still leaving the rest of root good and healthy, crippled only by lack of a means to suitably attach a crown. There are cases when a side split off may be built up with amalgam if anchorage can be maintained. In other cases a band may be so fitted as to draw the broken part tight up to place and held there so firm that a crown may be fitted.

In other cases where the split-off piece is gone, a band nicely adjusted may hold amalgam, first adjusting a bit of waxed wooden toothpick in the root canal protruding far enough to extend a little beyond the packed amalgam to give something to pull it out by after the amalgam has hardened. A hole may thus be left through the amalgam up into the root through which it may be medicated, if need be, and all ready for a dowel pin in adjusting a porcelain crown.

Since Dr. W. H. Taggart disclosed to the profession how to cast gold, that metal or any other suitable for the mouth that can be cast satisfactorily may be utilized to make a restoration of the broken or decayed roots so that a porcelain crown may be satisfactorily adjusted. Low fusing metal may be used, cast from a wax model fitting with accuracy every inequality. These cast fittings, of course, are to be cemented, and when of gold may be a part of the crown, instead of being a separate base, all going on in one piece.

(To be continued.)

PATHOLOGY.

BY GEO. W. COOK, B. S., D. D. S., CHICAGO, ILL.

DEAN OF DENTAL DEPARTMENT, UNIVERSITY OF ILLINOIS; PROFESSOR

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In the discussion of this subject, thus far, we have seen that bacteria play a great part in the arts. Facts have gradually accumulated from observation, patient work, and powerful concentration, which has resulted in the great accumulated knowledge of the biological phenomena of bacteria, which we know as scientific bacteriology. While the science is by no means exhausted, in fact, we can say that we are only on the threshold of this great micro-biological science, dealing as it does with all its morphological and physiological phases, of both animal and vegetable life; for we are hardly prepared to say yet as to just where the animal and vegetable organisms become a distinct and separate specie into the kingdom to which they belong.

The study of micro-organisms, their habits, in and out of the body, both plant and animal, may be said to have begun in the last half of the seventeenth century, when Leeuwenhoek discovered with a microscope, that had been constructed by himself, small organisms which were designated as infusorius. These organisms were found in saliva, putrefying fluids, pus, and in other substances; but their true etiological relations to pathological processes may be said to have begun after the discovery by Koch, the method of isolation, by means of artificial cultivation in colloid substance.

The observation that bacteria possessing certain well defined characteristics are always present in certain disease. To identify their relation to disease Koch has laid down three rules that must be complied with in order to establish the true etiological relation of micro-organism with disease. (1) They shall be present in such numbers as would justify the symptoms of this special disease. (2) They should be grown in artificial culture media outside of the animal body. (3) They should produce the characteristic symptoms of this disease when inoculated into susceptible animals. However, we might say here, there has been some modification in these varied extreme rigid rules, laid down as they were at an early period of the discovery of the pathogenic properties of bacteria, and their relation to certain characteristic symptoms of diseases.

It has many times been observed that bacteria have been present in pathological processes which proved impossible to cultivate artificially; on the other hand, it occurred that those cultivated artificially do not always prove virulent. It was observed that bacteria varied in form and in specific action, both in and out of the body; it was also observed that certain bacteria would produce ill effects from their decomposition products. Thus, we see the difficulty that has baffled so many scientific workers in the true classification of bacteria.

A bacterium that produces a disease in man may not produce any disease in the lower animals, so far as is known, while on the other hand, insects or some of the lower animals which have no ill effects on man; as an illustration, the hay bacillus, which is non-pathogenic to man, produces fatal disease in flies. There are some bacteria, however, that appear perfectly harmless and are classed as non-pathogenic, but under certain conditions they prove harmful to both animal and man. The anthrax bacillus is usually given as one of the most typical forms of the pathogenic type; Pollender discovered this micro-organism in 1849. Davaine and Rayner made some further studies of this germ about 1850.

Koch took up the study, who was first to discover the process of spore formation; this is a non-motile, rod-shaped form when found in the blood of animals, but they grow in long filamentous form in the culture media. This micro-organism will only grow at a temperature from 12° to 24° C. As we have previously stated, a temperature above 42° materially interferes with spore-formation, as spores are only formed between 18° and 42° C. Free oxygen is necessary also for the formation of spores; thus, we see that spore formation in the animal body will not take place.

There are many animals that are susceptible to the pathogenic properties of this micro-organism; cattle, horses, goats and deer, and certain kinds of so-called common sheep, while the Algerian sheep is practically immune to the action of this germ. Dogs are more or less resistant. When an intravenous injection is made in dogs, a kind of generalized infection takes place, abscesses arise, etc. Domestic fowls are resistant to this germ, but can be made susceptible by chilling or hunger. Man has more or less resisting power. This infectious disease is quite frequently found in persons working in the sorting of wool or old rags. This infection usually takes place in the

lungs; it may also be transmitted to man by the biting of insects that had been feeding on animals sick with the disease.

Buchner has shown that when the spores of anthrax are inhaled there is a general infection instead of a localized inflammation. There is found occasionally contagious epidemics of the skin. It also appears as an epidemic among horses and sheep brought about through the animal feeding on hay taken from pastures where animals have decomposed after death from the disease. This micro-organism is classed as one of the most constant pathogenic germs yet studied; but, as has been stated, that it is possible for this germ to be made to act as a saprophyte.

There has a great deal of experimental work been done as to just how this germ produces its pathological effect on animals. The question arose whether or not this disease process was brought about through the production of a ptomaine or toxine poisoning. Hoffa seemed to have obtained a ptomaine which, when injected under the skin of animals, produces the characteristic symptoms of the disease, but as yet these experiments have not been satisfactorily verified. In 1889 Hankin obtained several interesting products. Martin found by growing the anthrax bacillus in blood serum for ten or fifteen days he was able to obtain an albumose and traces of peptones, which in its chemical action behaved very much like peptic digestion.

But a further investigation by Hankins, Martin, Balp, Carbone, Landi, Maltzew, Wesbrook and Klemperer found that this albumose had only slightly toxic effect on animals injected with this substance. Brieger and Frankel obtained a toxalbumin from the animals dead from anthrax; their preparation of the albumose seemed to be possessed with greater toxic properties than that obtained by the investigators previously named from the artificial cultivation of this germ. Marimer cultivated the germ of anthrax in a menstruum made in the following way:

Water	.1,000	grams
Pepton	. 40	grams
Sodium chlorid	. 15	grams
Sodium phosphate		grams
Potassium phosphate	2	grams
Glycerin	. 10	grams

From this solution the author obtained a specific toxine which

seems to have had a very variable effect upon rabbits, when injected with this agent. Thus it can be seen that with the present chemical facilities and knowledge, no definite conclusions have as yet been obtained as to just how this infectious process produces the effect that it does upon the animal body. That it is an infectious organism there is no doubt, and that its action is mechanical is a theory that has been advanced by a number of good authorities, which will have to remain until more light has been thrown upon the subject.

As the anthrax bacillus does not interest us as dentists, still the biological phenomena of this micro-organism is of such great importance in the study of the relation of bacteria to disease that it will always have a place in the discussion of pathological processes.

We will consider here some of the pyogenic bacteria: they are, strictly speaking, those forms which are classes as spherical cocci, which, when grouped together forming a grape-like cluster, they are designated as staphylococci; the name being applied to this form of bacteria by Ogston, who was the first to discover them in the tissues of animals in this bunched-like appearance. They appear, however, many times in artificial cultivation as a micro-cocci. They appear in artificial culture media like gelatin in three distinct colors or pigment formation; they are thus spoken of as staphylococcus, pyogenes aureus, citrus, and albus. While the name indicates that these are pus-producing germs and are classed as the true pathogenic, this does not, however, preclude the possibilities of there being other germs that are capable of producing a suppurative foci in the animal tissue.

There is another well-known micro-organism that belongs to this class; they are known as the streptococcus, meaning that the cocci are apparently attached together by a gelatinous film, and arrange themselves in a chain-like formation; they are also found in local suppurative processes.

The most typical forms of the so-called streptococcus can be found in that skin infection known as erysipelas. These all grow in the various culture medias that have already been named. The inoculation of artificial culture media from the pus of patients suffering of erysipelas will soon show that these chains gradually decrease in length until finally there is only the appearance of the single cocci.

This very interesting biological phenomena is one that leads

far into the subject of specificity of bacteria. This phase of the subject will again be referred to in the discussion of saliva, and its effects upon the physiological processes of micro-organism of the oral cavity. Right in this connection we might mention that there is a group of bacteria that belongs to this cocci form that vary in their relation to each other. For instance, we may have two cocci, situated side by side or together; this we call diplococci. This form is best illustrated in that known as the pneumococci. The cell is sometimes shaped as a lance, thus the name, diplococci and lanceolatus.

Pasteur was the first to cultivate this micro-organism from ordinary saliva. Later Talamon cultivated this germ from the sputum of individuals suffering with the well-known disease pneumonia. He at that time proved that it would produce a septicæmia in rabbits.

A. Frankel, however, was the first to prove that it was the true cause of fibrous pneumonia in man. This germ is frequently found in the oral cavity of individuals who have never suffered with the characteristic symptoms of the disease; to it is attributed the cause of various forms of sore throat. Some observers have gone so far as to state that it was the active factor in fifty per cent of the cases coming under their observation.

A thorough investigation of forty-two cases studied by John C. Cook and myself, we found thirty-one in which this germ was present in the ordinary sore throat. In sixty-one cases where I made an examination of badly decayed lower six-year-old molars this germ was present in twenty-nine cases; from eleven did I obtain virulent cultures. Thus, with my present knowledge on this point, I am forced to the conclusion that its etiological relations to such local pathological lesions as sore throat are not to be dreaded as much as we were at one time led to believe.

A number of investigators have called this germ by various names; Weichselbaum designated it as diplococcus of sputum septicæmia; Miller, in his work on micro-organism of the human mouth, has called it micrococcus of sputum septicæmia. Later investigators seemed to be rather inclined to the term streptococcus of pneumonia; Lehmann and Neumann are inclined to accept the older term, streptococcus lanceolatus of pneumonia. There are a number of other terms by which it may be called, but it would be of no practical value to give

them here. Krouse and Pansini are inclined to believe that the streptococcus pyogenes and the streptococcus lanceolatus is one and the same; the difference between them being only variation due to environment. There is one very evident fact, that in most all cases of both the fibrous and croupous pneumonia, a streptococcus form is most always observed in connection with the diplococcus lanceolatus, and in many of these capsule forms we may also have a chain-like form in the capsule. It is also very true that these forms are more virulent than where we only have a few capsulated forms (The virulency is exceedingly variable and the usual artificial cultures pathogenic properties are rapidly lost.) Quoting from Lehmann and Neumann, in man subcutaneous injection from 1 to 2 c.c. of virulent cultures in seven men was without important effect, except local symptoms, some fever and headache.

Dr. Drueck and myself injected rabbits and guinea pigs with sputum; from eleven cases of croupous pneumonia, all with the exception of one proved to be extremely virulent. We were able to obtain pure cultures of the streptococcus lanceolatus from the blood of the dead animals; these germs were inclosed in well-defined capsules, but when growing them in artificial culture medias seven lost their virulency and also the capsule and became a micrococcus. From the other three of these cases they remained as a diplococcus and retained some of their virulent properties.

Right in this connection we will briefly mention another microorganism that semed to be closely related to pneumonia.

This germ was first studied by Friedlander, who gave it the name of bacterium capsulatum pneumonia. This micro-organism is most always surrounded by a gelatinous well; thus the name, capsulatum. This micro-organism seems as a true coccus. In some instances it produces the same septicæmic condition as it does to the diplococcus; the question naturally arises: Does the bacillus of Friedlander have anything to do with the etiology of pneumonia? With our present knowledge we are forced to the belief that it has nothing to do with the specificity of pneumonia.

Fritsch first identified a micro-organism partaking of all the cultural and microscopic appearance of the bacillus of Friedlander; Palteauf and Eiselberg cultivated this germ from nasal tumors, "Rhinoscleroma." I had the privilege of studying four cases by Dr. Charles J. Drueck. We were able to isolate this germ from

these small tumors in the nasal passage and were also able to produce similar growths in the nasal passage of rabbits, but were unable to bring about any pathological lesions of the oral cavity, except in one instance, we produced in about two weeks quite a large fungoid tumor along the buccal mucous membrane, over the second molar tooth. We were able to isolate from this tumor the same organism, but were unable to produce the characteristic tumorous growth from this germ. It will, undoubtedly, under some environing conditions, produce in certain epithelial and lymphoid tissue, small, benignant tumors.

(To be continued.)

THE EDITOR IS MARRIED.

MARRIED.—November 1, 1907, Dr. George Washington Cook to Mrs. Margaret Irons, of Hebron, Ind. At home Friday evenings January 10th and 24th, 4547 Lake avenue, Chicago.

The AMERICAN extends most hearty congratulations to ye editor, and best wishes—and more best wishes. There isn't a man in this land, where he is so widely known, but will wish him all the happiness there is.

We married men welcome him to the ranks of the benedicts with hopes that his and Mrs. Cook's benedictions may be many.

That Cupid has taken us by surprise goes without saying. We thought him immune; and to think that he, our Cupid, who has so long played the artful part, but himself kept free from Love's infection while wearing a sort of smile of commiseration for us who had become infected, and had to go home early, and thought we were happy in wedded bonds now finds the germs lodged in his own heart, and himself fastened in matrimony with Irons and proclaiming that he never knew what living was before!

George, George, we thought you were wedded only and everlastingly to bugs. Shoot the bugs! huh? Step on 'em! There is something else in life. You have done noble; and may you and yours be immune to any and every germ that might bring you unhappiness.

T. B. R.



TOOTHSOME TOPICS.

BY R. B. TULLER.

I've been z-z-stung!

I've been stung by a mumble-wasp.

The wound is deep-well, I'll show you a stinger.

It may be a case of mistaken identity on the part of the wasp.

If it wasn't for the reference to "skinny," and "red head," and "freckles" I'd suspect that it was really intended for me. Anyway, I'm jabbed.

Here's the stinger. Wow!

Mr Teethsome Topics

Sir: Som time ago you wrote a piece, "don't be a dam zozzler," and you ast enyone who don't agree with you to rite and you wud print it and there pictur to.

You that was a awful smart peace I spoze; but I wanter say to you that it is bout time you got off yer purch.

Say, I'me purty near threw with my 07 Almynack, and Ile send it to you, sos you can borry some Gokes frum it.

They ain't all erigernal and neether be yours; and they ain't all trew and yours neether.

Bout all you do, like some other Chicago fellers, is toe knoc somboddy. In that zozzler peace you thoght you'd knoc me after bein at my house, eaten my bred and smokin my cegars last yeer when you wer out this way.

But yew can't rettycule me from what i kno as well as yew and a goodeel better and longer. I stand fer e-connymy in rubber dam and I ain't a shamed of it, an can give you and a lot of other fellers pinters and cards and spades.

But take a little weezen frekel faced red hedded yung runt like you not long out of collidge and they kno it all. How long you ben graderate enny way.

Let me tel you "bub" that I ben practisin dentristy nigh on to

50 year, afore ruber Dam was thought of. I hev travelled more and practise in more states than you ever thought of.

I practise when we used to go from hous to hous, and hav to stop the mouth all up with towls to keep her dry—and I do now some times.

Dam is a good thing and I recogniz that wen it first come out, and I showd you how to puncher one and keep on a puncherin it as long as ther was a place left, pritty nigh,—and gum her up with shoo-maker's wax to stop up the holes you dont want open.

O i remember how you stuck up yer Nose and sed you allus used a new peace and I that then that little red headed punk will be puttin me in his teethsom Topics or tommy rottics and things, an after eaten my bred and pi and smokin my cegars an takin a 25 cents green creem de pepper minth on me when I ast you would you hav a glass of beer.

O, youve got yer pnerve, but now Ime going to say my say and it ul be such as Ile bet you dont dast to print. Come on now.

Yes, sir, I washe my dam as offen as I dam pleeze, an I puncher it so full of holes it looks as if it had ben shot full of burd shot, and I don't convey no inflection from one mouth to a nuther neether.

I want to tell you, sunny, that I kno more a bout antiskeptics than you ever lernt. Ive dabbled in em all and now I ti up to the best ther is an that is wich hazle it cant be beet. i don't hav no trubbel becaws I Saterate my dam in wich hazle—som times let it lay all nite.

I kno from experuence of menny years that wich hazle will drownd microbes, and Backtery and jerms and mucus—drownd em dead in 3 minits.

But fer all that I dont stop there. Ive got a small close ringer in my shop and I ring out my dam dry an if enny livin or ded thing can go thru that and not be squz to deth flattern a pan cake, you show me. Wy the ringer, the way I squeez em, is enuff alone without ennything elce.

Now Ive ordered a small siz one all painted up fine and Ime goin to fassen it on my bracet arm an ring for the good affect befor my pashents.

(If a feller haint got no ringer he can do this—fold his rubber up bout 4 turns an lay it on a blok and swipe a few swipes with a mallet or hamer.)

Do you mean to tel me them Jerms and things can stand that? not on yer movin pictur.

Ile tel ye what I am the sorest about as conserns that zozzle piece of yours—one of my Pashents red that off my tabel while waitin and then she up an says, doctor I haint goin to let you use enny more dam on me that has been used before. I want new and if need bee Ile pay extry—but I want it every time.

Well, then she goes an sets up her mother and her sisters and her cuzzens and ants and now the hull caboodle and som others want new dam. They can pay all rite but do you think it perfeshinal to take 5 or 10 cents from a lady. Ime no cheep scate.

But I want to tel you that I can gum up holes in ruber with shoo makers wax so they dont know it, and haf the time they get fooled. fer all that yer dam Zozzle peace has cost me morne yer jernal is wirth and I want you to stop it right off short. Cansel me off yir books. Youve got to menny high Jinks notions—a lot of you Chicago fellers, and when you com to learnin em to the peepel you simply hurt bizness. Cansel me off. I wont reed your rot, ner let my Pashents. There is 7 in one family and 8 in a nuther an 8 more in a nuther and some more that you turned rong an I feel like punchin yer measley red hed. You needent call on me no more when you cum this way agin or Ime libel to do it. May be the jernel wud be all rite if they fird you. I hope the boss will see this if you hesertate to print it.

My methods com from axtual practice of yeers and not 5 or 6 yeers like you. Ile bet your collige never lernt you enny thing bout wich hazle the best sturilizer ther is fer Dam or Insterments. I use no other. A candy jar ful will last a year or too and it dont rust insterments.

Of course when I use Dam over and over I am as perticeler as I can be to take percaution to keep it in one family and a nuther peace for a nuther—jest pin a tag on with the family name and hang it up.

Huh! A feller was round heer wantin to sel me a white enamal sturilizer purty nigh as big as a wash biler—only \$38.00. Not enny fer yer Uncle MaGoom. I showd him I had him skinned a mile at a cost of sents insted of dollars—just a little blue granite basin that cost 15 cts.

There is lots of Dam that don't need no bilin, like them I am perticular to use in one family, becaws how be they going to git pizen from their own selfs, but when it needs bilin and when I do it to create a good affect I bile right afor my pashents, and as I said Ime goin to ring afore em too. A Operater who isent di plomatic and use his own jedgment haint much account. He haint got much hed if lets you lern him.

I told mr. agt. to go sell his biler to sum citty fool-not me.

Well, I dont spoze after all your talk about it, you will print this caws this is where you git knoc—some of yer own medcin. It haint up to yewer high fallutin notions, but enny way i hav the Satterfaction of tellin you to your weezoned frekel face what I think. If we listened to you weed throw away a insterment every time we used it and have a new one handy.

O you ar a wize gy, I dont think; but you dont fool old doc MaGoom. I culd lern you a lot bout dentrisy, mr. boy dentist.

Be wize, young feller, an youtilize all you can git out of this. Less see if you got sand to print it.

Yours in plain Inglish,

Dr. A. Magoom.

P. S.

P. S.

O, by the way if you do print this dont stop my jernel till after. I haint got no pictur handy nor photo, tho Ive had menny taken, but yule find mine in some of your papers where I reckomend Peruny and a rumatiz cure medicn. You can borry it Ime shure—if you return it.

All the same I haint got no use fer you and I dont care whether you print it or not.

My advise to you—personel—is to go zozzle yer hed and then rub on plenty of wich Hazle and take a fresh start, and dont try to be so funny about knocin. You haint so much.

Dr. Alvelus MaGoom.

A PLEA FOR THE CARVED CUSP.

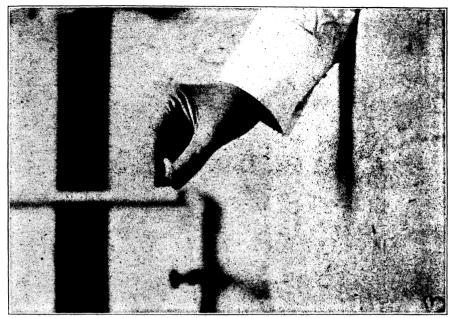
The demands on a dentist have never, I think, been so great as at the present time. The bewildering multiplicity of inventions, remedies and authorities make it absolutely necessary for a dentist to be progressive. The trend of thought of many of the members



Fig. 1.

is toward using more conservative methods in saving and restoring the teeth of patients.

In so far as crown and bridge-work restorations enter into, I might say, our daily practice, it is urgent upon us to use science





and skill to such a degree as to make a perfect restoration of the lost parts. And to this end the carving of the cusp to suit each particular case is the only scientific and practical method. Here-



Fig. 4.

tofore the various methods and systems in vogue have been long, tedious and generally inaccurate in results.

There is an increasing desire on the part of the profession to employ gold inlays in advanced stages of dental caries as a filling







Fig. 6.

material. Whether the restoration be made with an inlay or a crown, the same rule should be adhered to; that of carving the cusp of the crown or the articulating surface of the inlay to properly articulate.



Fig. 7.

Metalline (a new compound on the market) is especially useful for the carving up and subsequent swaging of cusps of teeth in crown and bridge-work. The method and results in detail are as follows: Trim and grind the tooth to be crowned, as usual, make

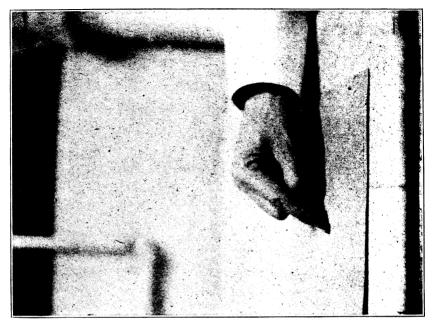


Fig. 8.



Fig. 9.

the bond, contour to fit the tooth, and trim a little short of occlusion. Now take a stick of Metalline carving compound and heat one end of it over a Bunsen burner (Fig. 1) or alcohol lamp until it becomes soft and plastic; then pinch a piece off (Fig. 2) a little larger

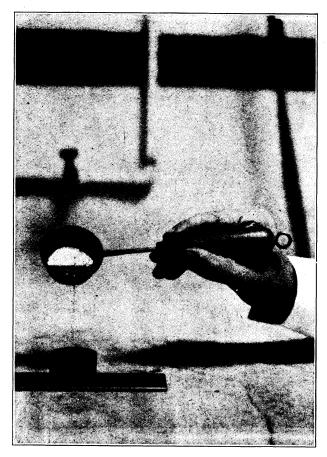
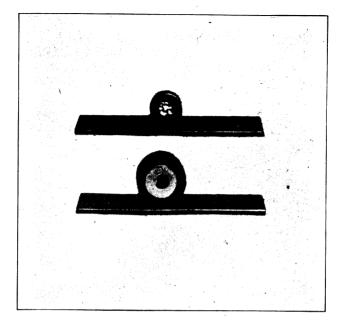


Fig. 10.

than a cusp and kneed between the thumb and fingers (Fig. 3) and while still soft place on the band of the crown in the mouth (Fig. 4) (represents the mouth) and request the patient to occlude the teeth and thereby you get the bite (Fig. 5). Pass a stream of



Figs. 11 and 12.

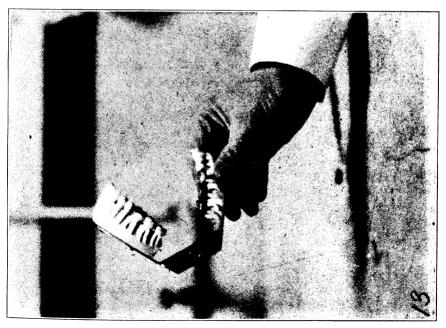


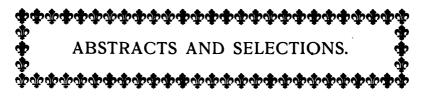
Fig. 13.

cold water on it from a syringe, open patient's mouth and remove the band and Metalline together. Now, for convenience in handling, heat the end of a stick of Metalline until soft, then press the band with the bite compound on the end of the softened stick, cool in water and proceed to carve (Fig. 6). Having carved the cusp it can be given a smoothly polished surface with a dry brush (Fig. 7). Next remove the cusp from the band and lay it on a piece of sandpaper (Fig. 8) and with your finger rub it back and forth until the part that may extend into the band is on a level with the margins of the cusp. Lay on an iron slab (Fig. 9), place rubber ring around it and pour Mellotte's metal over it (Fig. 10). Wait until cool and it appears as figure 11. Remove the metalline cusp with an instrument and die is ready for the swage (Fig. 12). Swage the gold into the die, trim surplus gold and the cusp should then be rubbed on the flat file to give a level surface. It will now fit the band perfectly (Fig. 13) and is ready to unite with solder.

By this process, with the use of Metalline the operation is shortened, there being no plaster casts to pour and impressions to make in moldine or other material, no change in the original carved articulation. In fact, the nature of Metalline is such as to withstand the heat of fusible metals, neither contracting or expanding under them, thus producing a smooth and perfect die. Anything that can be designed by carving is readily and accurately reproduced in a metal die by the use of this substance.

The restoration by a crown or bridge-work being necessary, it is our duty to give the patient a piece of work that not only produces proper æsthetic appearance and is in the highest sense durable, but is to the greatest degree serviceable in mastication. Let the carved cusp have its inning with the rest of the skillful work we are doing in this advanced era.

F. A. Motis, D. D. S.



ON THE SEPARATION OF PLATINUM, GOLD AND SILVER FROM A MIXTURE OF LABORATORY FILINGS.

L. LEMERLE, PROFESSOR AT THE ECOLE DENTAIRE OF PARIS.

The method about to be described of separating platinum, gold, and silver from laboratory filings is the one followed by a well-known Parisian firm of assayers. The quantities of different chemical reagents and the substances given throughout this review are the quantities to be employed in treating a weight of filings of about 100 gm.

Dissolution.—Place in glass globe of one-liter capacity the quantity of filings to be treated and a mixture of 150 gm. nitric acid C. P. and 450 gm. hydrochloric acid. Heat the globe over a dull fire or in a sand bath.

Evaporation.—When the filings have been dissolved pour out the contents of the glas globe into a porcelain dish, and evaporate the fluid slowly to a syrupy consistence. Now add to the syrupy fluid 100 gm. of hydrochloric acid, and cover the dish with a funnel to prevent any portion of the liquid from splashing out on account of the active reaction which takes place upon the addition of the hydrochloric acid. When the reaction is completed, evaporate the solution as in the previous case, to expel the excess of acid.

Separation of Silver.—Add to the liquid 300 gm. of distilled water, and heat for about one hour in order to complete the precipitation of silver chlorid. Filter and collect the filtrate in a glass of 750 ccm. capacity. The precipitate of silver chlorid which remains in the filter is washed three or four times with boiling water, and this water is added to the filtered solution.

Separation of Platinum.—To the filtered solution 150 gm. of pulverized ammonium chlorid are added, and the contents of the glass are stired with a glass rod and allowed to decant for at least six hours. The platinum will now be found precipitated in the form of chloroplatinate of ammonia. The platinum precipitate is now collected

by filtering, and is washed with 200 gm. of cold water to which 30 gm. of sal ammoniac have been added. The platinum precipitate and water are again filtered and the liquid is collected in a glass receptacle of one-liter capacity.

Separation of Gold.—In the latter receptacle, 100 gm. of crystals of ferrous sulphate are dissolved, stirring the mixture from time to time with a glass rod, and allowing it to decant for eight to ten hours. The gold is slowly precipitated in the form of a brownish powder. The contents of the glass receptacle are now filtered in order to collect the brown powder, which should be thoroughly washed, as in the case of the silver chlorid.

The separation of the precious metals being now completed, it remains to convert the products thus obtained into metallic form.

After having been completely dried, the silver chlorid is placed, together with the filter in which it is held, in a crucible, where it is fused with a mixture composed of three times its weight of sodium carbonate and 4 per cent of its weight of charcoal. After the mass has been fused and cooled, the crucible is broken and the silver ingot is removed. The chloro-platinate of ammonia is detached from the filter and the paper is burned in a porcelain dish, in order to collect the small particles of platinate that may have remained attached to the paper. In the same porcelain dish the platinate is placed and calcined, heating the dish slowly and progressively and carrying it eventually to a white heat, at which point it should remain until the evolution of the white fumes has ceased. The gold is treated by the same process as described in the case of silver, with the exception that instead of the sodium carbonate and charcoal mixture it is fused with three times its weight of borax and once its weight of saltpeter.—Dental Cosmos.

SOME SUGGESTIONS FOR DENTAL COLLEGES.

BY L. P. HASKELL.

During the seventeen years of the Haskell post-graduate School, graduates of nearly all the dental colleges have taken the course, many of whom have been in practice for years, and yet at least seventy-five per cent of them have never put in the mouth a metal plate.

So far as I could learn, the reason therefor was that the instruction in the line of work was so imperfect they had not sufficient confidence in their ability to construct such a denture to venture to recommend it to their patients, and so resorted to the vulcanite plate. I will suggest some of the causes leading up to this state of affairs.

Too much of the student's time is taken up in the lecture room in the effort to tell him how to do some mechanical thing. It is all labor lost. The only place to teach it is at the bench, tools in hand, under the eye of a *competent*, *experienced* demonstrator, for it is too often the case that the demonstrator is inexperienced. Then again he should be constantly on the alert, watching the students and taking the work in hand if necessary.

Instruction too often is not simplified, and much of the student's time is taken up in fruitless efforts to do what should be made a simple thing. I will illustrate some points:

The student should be told to make his model flaring so it will drop from the mold; it should never be lifted out.

Abandon the use of the Bailey flask for molding ring, for it is too small and ill-shaped for proper work. Provide a ring five inches in diameter and two and a half inches deep. The Buffalo Company have such a ring, also the Justi branch house. A small wood potato masher with knob whittled off will serve to use at the sides of model and large end on top.

Each student should have a molding box fifteen inches square, six inches deep. Buy a can of Chase oiled sand, use Babbitt metal, two pounds, counter die metal, four pounds, five parts lead, one part tin: this not to be poured hot as it comes from the heater, but stirred until it begins to crystallize, then pour quickly, having coated the die with moist whiting dried and placed where it came from in the

sand mold but inverted, and the sand pressed with the spatula to just above where margin of plate would be; then place over it the Bailey flask.

Do not use German silver for plates, but soft brass, gauge No. 28, cut in strips two and a half inches wide.

Do not set the student to work with the usual horn mallet with its pointed end, which is worthless, and its large end equally worthless. Saw off the pointed end where it is three-quarters of an inch in diameter and round it with the rubber file. This is ready for use on the palatal surface and along the margins. After swaging the tuberosities and palatal surface, cut a slit from the margin at the median line to the top of the ridge, lap, swage and solder, laying the solder on the inside and applying the heat on the outside, previously prying apart the lap and applying the borax in plenty, swaging again. The reason for cutting and lapping is two-fold; here is the weakest point where the plate often breaks. The lapping increases the strength one hundred fold. Then again, in undercut conditions much time and bother is saved. There is no valid reason for not cutting and lapping.

To prevent the base metal from adhering to the plate, oil the dies, and before annealing again wipe off the base metal.

Wiring the plate is simple. Attach the wire along the right margin for about an inch with two small iron wire clamps, doubling the wire with flat-nosed pliers, so as to have a loop at the bend. Having flattened the ends, borax and solder, fitting with the pliers to the margin of the plate an inch and a half at a time, with plate on the die; clamp and solder fully till completed. Be sure the borax is plenty or the solder will not flow, and the wire will melt. When soldered, file the margin to a finish. Use a six or seven-inch file, half round, No. 3, with handle.

The student following the directions will have no trouble and expedite work.

It is just as easy to fit successfully a metal plate as a vulcanite one; in fact, in the flat, ridgeless jaw, more easy.—Items.

GOLD INLAYS FOR INCISORS AND CUSPIDS—A NEW METHOD.

BY L. ALLEN JOHNSON, D. D. S., MIDDLETOWN, DEL.

In many of the cases of badly broken down cuspids and incisors coming under our observation, the bite is such that the use of porcelain for the restoration of corners is contraindicated; not that we do not possess adequate skill, but the limitation of the tensile strength of porcelain is such that we feel that such a restoration will ultimately result in a failure. This is especially true where the patient is of a vigorous temperament and a pipe smoker.

It is the purpose of this article to deal with those cases wherein the process of decay has gone to the point where devitalization is indicated as a conservative operation, although the inlay method herein described may as readily be applied where the pulp is vital, retention being attained, as with the porcelain filling, without the screw-post.

We will take as our first illustration a superior central incisor having a very large mesio-incisal cavity, pulp removed and apical foramen scaled.

After reaming out root canal to readily take a platinous gold post, gauge 14 to 16, prepare the cavity as you would for a porcelain filling except that the mesio-incisal corner should be slightly beveled to afford extra protection to the enamel edge. You will now take an impression of the cavity with dental lac and obtain a die or cast of the cavity in the inlay metal for sale by the S. S. White Dental Manufacturing Company. This die or cast in the swaging ring is placed in the inlay swager and 36-gauge pure gold is swaged over it. The inlay matrix thus obtained should be returned to the tooth cavity and burnished to an exact fit.

Having the matrix in place the platinous gold post is pushed through to a position in the root canal and hard (or sticky) wax flowed around post on floor of matrix to unite them in order to facilitate their withdrawal without change of position. After investing the canal portion of post and the under side of the matrix, flow 22 k. solder around post to replace the wax on the floor of the matrix. Replace matrix in tooth cavity and cut off excess of post.

With hard wax now restore the tooth to full contour (less the

thickness of 36-gauge plate), giving the wax a glazed surface by means of hot air.

From 36-gauge 24 k. plate, cut an oblong strip, sufficiently long to cover cervical margin of cavity and extend one-eighth of an inch below the incisal edge, and wide enough to extend from the labial margin and cover the mesial surface of wax.

This strip is now placed between the wax filling and adjoining tooth, and with the fingers and double end burnisher is brought smoothly over the wax, cutting the lower edge, to facilitate the restoration of the contour. The assembled parts are carefully removed from cavity and lightly invested, so that the heat directed from below will flow the 22 k. solder dropped through the opening on lingual surface.

After trimming the inlay with curved shears it should be cemented in cavity where with stones and disks the operation is concluded. The total time consumed should not exceed one and a half hours, regardless of the size of the cavity.

The very secure anchorage of an inlay or filling having a post makes it an ideal abutment in the centrals and cuspids for the support of a lateral incisor.—Items.

DR. GEO. W. COOK MARRIED.

The Dental Review seldom publishes marriage notices, though many of them are kindly sent to it each year. They are always of interest to the editor, but he is not sure that they are of interest to the readers, and so they are omitted. But there is one that it will never do to ignore. When so important an event as the marriage of our distinguished colleague, who is editor of The American Dental Journal, is announced, we must pause in our mad career of professional activity, take off our hats, salute with our most profound bow, and smile our congratulations. Dental journalism has been dignified by this act, and the country is safer than it was despite the temporary tightness of money. Dr. Cook is said to wear a continuous smile now, while previously he wore one only about seven-eighths of the time. Long life, prosperity, and happiness.—

Review.

SPINAL ANESTHESIA FROM THE STANDPOINT OF THE PATIENT.

BY JOHN S. MARSHALL, M. D.,
EXAMINING AND SUPERVISING DENTAL SURGEON, U. S. ARMY.

In relating my personal experience, as a patient, with spinal anesthesia, I do so with the hope of adding something to the knowledge of the physiological effects of cocain when used in this manner for producing insensibility to pain in surgical operations.

Spinal anesthesia has at the present time but few advocates in the profession, and will I think, for obvious reasons, never become popular with the public; nevertheless, it is a safe and valuable mode of producing anesthesia in certain cases, and should, therefore, be accorded the recognition which its successful use in hundreds of cases entitles it to receive at the hands of the profession.

After witnessing several operations made upon various portions of the body by Dr. Morton, of San Francisco, in which this method of anesthesia was used with apparent success, I became interested from the standpoint of the oral surgeon, and determined to try it myself upon the first suitable case presenting that required operation upon the maxillary bones. After several months a patient presented who had a fracture of the mandible that required extensive wiring, and with the consent of the patient this method was tried. It, however, proved a signal failure, as the patient declared there was no insensibility to pain nor the slightest anesthesia in the upper extremities, neck or head.

Maj. J. M. Kennedy, surgeon U. S. A., who assisted me at this operation, had similar experiences in other cases in which he had used this method of anesthesia. He, however, was generally successful in producing complete anesthesia in those portions of the body that are supplied by the sacral plexus, and the only unpleasant symptom encountered was a persistent headache, continuing sometimes for two or three weeks after the injection.

My interest in this method of producing anesthesia was so great that I determined, should it become necessary for me to submit to a surgical operation, to insist upon the use of spinal anesthesia, that I might have the opportunity of studying its effects from the personal and practical standpoints, and thus settle in my own mind at least its merits and disadvantages.

On January 11, 1907, it became necessary for me to enter the U. S. Army General Hospital, Presidio, San Francisco, for an operation for double inguinal hernia.

This disability was of long standing, having been incurred in a railroad accident in 1864, while en route to the front with my regiment. I am at this date sixty years of age; heart, lungs and kidneys in a normal condition, and in all other respects in perfect health and condition. The operations were performed by Major Kennedy, assisted by Captain Shaw and Lieutenant O'Conner, assistant surgeons U. S. A.

The patient after being prepared for the operation is seated upon the operating table and told to lean forward and arch the back as much as possible. This separates the vertebræ, dorsally, to the fullest extent. The lumbar region is then thoroughly scrubbed with soap and hot water, washed with bichloride solution 1 to 1,000, followed with alcohol. A hypodermic syringe, glass barrel, with piston down, which has been previously sterilized and charged with one grain of sterilized tropa-cocain (the usual dose), is now handed to the surgeon and the needle inserted between the third and fourth lumbar vertebræ and carried forward until it enters the spinal canal; the piston is then gradually withdrawn until the barrel is filled with the spinal fluid, which is allowed to remain until the cocain is dissolved. This takes but a few seconds, and the piston is then gradually carried to its former position, returning the fluid charged with the cocain to the spinal canal. The needle is then withdrawn, the puncture washed with alcohol and sealed with collodion.

The introduction of the needle is no more painful than for an ordinary hypodermic injection. Upon withdrawing the spinal fluid from the canal a slightly painful sensation, like that from heavy pressure, was experienced. This was doubtless due to the establishment of a partial vacuum within the canal, as the pain immediately passed off upon the return of the spinal fluid to the canal. As soon as the needle puncture was dressed I was laid upon the operating table and the area of the operations again cleansed.

In about one minute after the cocain was injected a sensation of numbness was experienced in the toes; at the end of two minutes this sensation had extended to the knees; and in three minutes it had reached the umbilicus. Accompanying the numbness in the legs was a sensation of *great* weight. It seems as though they weighed tons, and that by the greatest effort it would be impossible to move them, yet upon making the attempt to move the toes and to flex the legs at the knee it was found that motion was not impaired.

The operation upon the right side was now begun, and the tissues proved to be completely anesthetic. While the operation was in progress I was studying the further effects of the cocain upon other portions of the body.

In five minutes after the injection, numbness was experienced in the fingers and hands. Sensation was entirely suspended in the third and fourth fingers of both hands, but anesthesia was not complete in the thumb nor in the first and second fingers. No sensation of weight was experienced in either of the hands or arms, and although a slight numbness was experienced from the shoulders downward to the hands, there was very little diminution of sensation in the shoulders, or in the region of the brachial plexus. The neck and head were in nowise affected by the drug, sensation remaining complete and unimpaired in these portions of the body. In about twenty minutes after the introduction of the cocain sensation was completely restored in the fingers, hands and arms.

The operation upon the right side was unusually prolonged on account of the complicated nature of the hernia, viz., direct and oblique combined, and numerous adhesions of the hernial sac with the walls of the inguinal canal. The time consumed in this operation was just thirty minutes. No sensation of pain was experienced during this operation until the introduction of the first superficial suture. It was very evident from the increased pain caused by the introduction of the other three sutures that the anesthetic effect of the drug was rapidly passing off and that in all probability the operation upon the left side would be somewhat painful. I was, however, willing to endure this rather than to take a second injection, or to postpone the second operation to a further date, as I was anxious to have the whole surgical procedure completed at that time, and, furthermore, I desired to carry out my study of the effects of the drug to the end. I therefore requested the surgeon to go on with the second operation, assuring him that I could endure it, and that I would not flinch under the knife.

I nearly repented of this, however, in the next few minutes, for

the first touch of the knife was quite painful, and gradually increased in severity as the operation progressed.

The most painful part of this operation was the tying of and amputating the hernial sac. At this time I experienced a nauseating and sinking sensation in the region of the solar plexus and for a few moments I feared that I was about to lose consciousness. A few inhalations of spirits of ammonia, however, gave me the necessary stimulation to prevent a loss of consciousness, and I was not again troubled with faintness.

At this time I noticed that the sense of great weight in the legs had entirely disappeared and that numbness was now only distinguishable in the toes. The suturing of the deeper tissues was exceedingly painful and it seemed to be that the anesthesia had entirely passed off in this region of the body. Before the deep sutures were all in place the numbness had entirely passed from the toes, as was proved by the fact that when moved against each other the sensation appeared to be entirely normal. At this period my courage for a moment failed, and I begged for a few inhalations of chloroform, but was assured that the operation would be completed in five minutes, so took a new grip upon myself and endured it to the end.

The second operation consumed just twenty minutes. There were no complications encountered in this case, and as I was suffering so acutely, every one connected with the operation worked as rapidly as possible, that they might the sooner bring my suffering to an end.

The whole surgical procedure consumed just fifty-five minutes: three for the anesthesia and fifty for the operations. At no time while under the anesthetic effect of the drug was there any acceleration or diminution of the heart action or respiration; neither was there any stimulation nor depression of the mental faculties. The headache so frequently complained of for several days or weeks did not occur in my case. The only unpleasant after effects experienced from the operations was the accumulation of gas in the stomach and bowels, that so frequently follow abdominal operations and which is in no way related to the kind of anesthetic employed.

From this experience with spinal anesthesia I am led to the following conclusions:

First.—That spinal anesthesia is a safe and reliable method of

producing insensibility to pain in certain surgical operations in normal individuals.

Second.—From the fact that this method used with the usual dose does not seem in any way to disturb the cardiac or respiratory nerve centers, it would be indicated in those cases in which chloroform and ether would be contraindicated.

Third.—That for all operations below the diaphragm which do not consume more than thirty minutes for their completion it is a most admirable method of anesthesia.

Fourth.—In operations above the diaphragm it would seem to be of doubtful utility with the dose usually employed. Morton is in the habit of making the injection with considerable force and elevating the lower extremities when using this method if the operation is to be upon the upper portion of the body, and he claims to be successful. In the case referred to in the body of this article as having fracture of the mandible, Morton's method did not give the desired result. It is possible, however, that by increasing the dose, anesthesia of the head might be successfully secured, but as I have had no experience with a larger dose than one grain, I would not hazard an opinion upon it.

Fifth.—It would not be wise to use this method of anesthesia in the case of patients who have a great nervous dread of surgical operations and in whom the consciousness of being operated upon might produce mental shock, or in the case of patients who could not be controlled by reason.—Items.

MANIPULATING MOLDABLE PORCELAIN.

I believe that the model method is preferable for adjusting the material. There are many accessible cavities that can be kept dry for a reasonable length of time, and it can be done much more rapidly by molding directly to the cavity. In the class of cases where it is indicated, however, I think it is desirable to make a model. You merely prepare the cavity, take an impression and dismiss the patient. If your model is not perfect, the final fitting may be advantageously made in the mouth. The fitting is done directly to the cavity, and the questionable feature of the accuracy of the model is eliminated. F. E. Roach, Chicago.

ALVEOLAR ABSCESSES AND THEIR TREATMENT.

BY W. R. CARRINGTON, D. D. S.

It is not the purpose of this paper solely to advance new ideas, but to keep before the profession the importance of treating alveolar abscesses in the various forms in which they may come to our offices. The dentist that resorts to the forceps every time a tooth abscesses is not deserving of the name that he wears. He may say that the compensation for handling the same is too small; but when he goes to work and saves a tooth that only a few days before seemed to be incurable, the patient will not only appreciate his time and labor, but will freely pay for them.

An abscess is a collection of pus within the tissues, which is always preceded by a circumscribed destructive inflammation which results in the breaking down of the tissue in a given area. Alveolar abscesses are those forms of inflammation occurring at the apical portion of the peridental membrane. These abscesses are divided into two general classes—acute and chronic.

Acute alveolar abscesses occur where the apical pericementitis becomes infected with the pus-forming germ. Before a tooth can abscess; the pulp tissue must be dead and the pus-producing micro-organism be present and active. This inflammation causes rapid swelling of the peridental membrane, which causes the tooth to be pushed or lifted out of the socket, and the patient complains of the same being elongated. As inflammation increases, the swelling becomes greater and the abscess more painful to the patient. find the temperature has risen from normal to nearly as high as 102, owing to the violency of the infection. The bone around the apex of the tooth begins to absorb the forming pus to accommodate the swelling membrane, and this absorption continues until the pus has reached through the bone into the soft tissue. When the soft tissue is reached, the swelling begins and continues to enormous size and form. Pus burrows in the way of least resistance until it finally approaches the gum of some distant tissue.

Acute alveolar abscesses are divided into four classes, according to the manner of the escape of pus. The first class is where the pus

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passes through the alveolus into the soft tissue, producing a rounded, fluctuated tumor, directly over the root of the affected tooth. The second is where the pus passes through the alveolus, tears up the periosteum, mesially or distally, and forms a round, flat tumor, sometimes two or three inches from the tooth affected. The third is where the discharge occurs along the side of the root of the tooth, between the peridental membrane and the tooth. The fourth is where the pus follows along the sheath of some muscle or its fibres until it finds an easy exit.

My method of treating these abscesses is to open into the formed tumor and evacuate the pus from the same, and then the patient is dismissed until the soreness has subsided. However, if the pain is not too great, I open the pulp chamber and canals at this sitting. I find that we can open into a very sore tooth by surrounding the affected tooth and its neighbor with plaster Paris. Also there are other means which may be used. When the pulp chamber and canals are opened into, I force chinosol through the canals and out of the fistulous opening. After the abscess is thoroughly irrigated, being sure that all pus is washed out of the cavity, I then place a piece of cotton or soft rubber smeared with vaseline over the opening on the gum and pump trikresol through the canals until I see evidence of the presence of the same at the opening on the gum. I hold this piece or cotton or soft rubber over the opening so that the trikresol is forced into every corner of the abscess. I then seal into the canals trikresol and formaline (trikresol two-thirds and formalin one-third), which is left for several days. When the patient returns, after thoroughly cleansing the canals with alcohol, and deodorizing with oil of cloves, and drying with hot air, I seal into the cavity Black's Onetwo-three and leave it for a week or ten days, and when the patient again returns and everything has gone well. I proceed to fill the root canals.

Class two is treated the same as class one, with the exception that we may have a serious destruction of large areas of bone as a result of tearing away of the periosteum. If I find there is any necrosed bone, it has to be removed surgically before we can look for a cure.

In class three I have had fine results by opening into the pulp chamber and sealing into it with trikreosol and formaline, equal parts. When the patient returns two or three days later, the pulp chamber and canals are cleansed with alcohol and oil of cloves, being thoroughly dried with hot air. I then place a second treatment of trikreosol and formaline, which is left for several days longer. At the next sitting the canals are cleansed as before and I seal into them Black's one-two-three, and I find that when the patient returns a week or ten days later, the dressing is sweet and the tooth is in good condition.

In class four, where pus has attempted to make an exit on the skin surface, especially about the face, it must be discouraged by making a free incision in the mouth and evacuating the pus through this fistulous opening. In the early stages of the abscess, a counterirritant is very beneficial, drawing the pus to a tumor in the mouth. Then this class is treated the same as classes one and two. The main thing in treating abscesses is to get free drainage and remove the cause.

In my treatment of abscesses, after the first sitting, I always work under aseptic conditions, using the rubber dam.

All acute alveolar abscesses have a tendency to become chronic. When an abscess has become chronic, there is more or less absorption of bone, and in most cases-I find a large pus cavity.

My method of treatment is to thoroughly irrigate the cavity with chinosol, through the canal and out of the fistulous opening. Then trikreosol is pumped well through the canals, filling the pus cavity and burning out all the pyogenic membrane. Formalin and trikreosol are sealed into the root canals, and the fistula is kept open with a piece of iodoform gauze. When the patient returns several days later, if the tooth and abscess are looking well, I do not resort to another irrigation, but if they are not, I do. I seal into the canals some mild dressing, such as Black's one-two-three, or camphophenique, and the opening on the gum is now left open and allowed to heal. When the patient returns a week or ten days later, if the dressing is sweet, I know that everything has gone well and the tooth is ready to fill; if not, it is advisable to give it another treatment. These cases are to be thoroughly examined. The nature of absorption can to some extent be determined by the nature of the discharge of pus, and the same can be confirmed by exploring through the external opening. Alveolar abscesses which do not yield to ordinary antiseptic treatment usually have a cause beyond the root canals. They may be caused by a deposit of serumnal calculus on the root. roughened conditions of the end of the root, and bone complications, such as caries of the root. The curetting of the pocket at the apex of the root will often bring about a cure. However, if there is caries at the apex of the tooth, we shall have to resort to a resection of the apex of the same, removing the carious part. If I find by exploring that the tooth is very much carious, it is useless to further try to save the same, and we have to resort to extraction.

The treatment for blind abscesses would be to seal into the cavity paraform, or formaline and trikreosol (formaline two-thirds and trikreosol one-third). In most cases this strong solution of formaline or paraform will cause the abscess to become active. Then the same is treated as previously described. If not, we can rest assured that all forms of infection are dead and we can go on and treat the same as we would any other tooth.

The treatment of abscesses is something that takes patience and time. In the early stages of infection, where the patient comes to our office suffering with intense pain, he is of the opinion that the sooner he gets rid of the tooth the better it will be for him, so we are discouraged in our efforts to save the tooth. In the early stages, where the patient is suffering so intensely, we have to give him relief at once. I have the patient to take some form of opiate—morphine or codine. If the patient is exceptionally nervous, it is better to give him sodium bromide, in fifteen grain doses for adults. The patient should be given a large dose of some saline cathartic—sulphate of magnesia or nitrate of magnesia. An old-fashioned foot bath is very beneficial. I make it a practice in treating abscesses, whether acute or chronic, to have the patient take some form of magnesia, and in most cases I have to repeat the same a day or two later.

There is a question that very often confronts the profession—why teeth do not abscess more than they do. "First, the animal cells surrounding the part affected may be sufficiently active to digest the micro-organisms and hold in check the putrefactive process. Second, the system may be able to carry off the products of putrefaction. Third, there may be present in the blood certain anti-toxins which reduce the activity of the putrefactive process and neutralize its effect."

Again, we may open into a pulp chamber which contains putrefactive matter and we find that we stir up a violently acute condition. This may be explained from the nature of the micro-organism as to its necessity for oxygen or air. We have indifferent aerobic micro-organisms which grow with or without oxygen. Then we have the aerobic micro-organisms which require oxygen or air. And then we have another class, anerobic micro-organisms which will not grow in the presence of oxygen. So this explains why we have an abscess from an opening into a putrescent nerve or sealing up a tooth whose pulp chamber and canals are open.

The drug chinosol is a one-minute drug and is the greatest pusdestroying drug at our command. It is non-caustic and practically non-irritant and wholly non-intoxicant, so it can be used ad libitum. In ten per cent solution it is a chemical germicide, which gives it its great pus-destroying quality; but it is recommended only where we have the pus-germ.

Trikreosol is a five-minute drug, and a two per cent solution is antiseptic, not being so escharotic as carbolic acid, and a greater germicide, possessing the quality of penetrating much deeper into the vegetable cells, and will destroy spores, so I advocate its use in burning out abscesses.

The great advantage of formaline and paraform in treating abscesses is that they readily give up formaldehyde gas, which is very penetrative to the pyogenis membrane, killing the pus-microbe-organisms and spores.—*Practical Dental Journal*.

ABSTRACTS AND SELECTIONS.

ANESTHETICS IN DENTISTRY.

BY G. P. ROBERTSON, D. D. S., SAN ANTONIO, TEXAS.

This is a subject in which our profession should be most deeply interested, and upon which we, as members of the profession, should place stronger emphasis.

In the first place there should be so much written and said about it that our schools would be moved to take up the subject in a different manner, and teach it so thoroughly, and demand so much of each student in actual practice before leaving school, that he will not think of general anesthesia with fear and trembling when he is out in practice and thrown upon his own resources.

How many of the practitioners here today had an opportunity during their senior year of administering chloroform, ether, nitrous-oxide or somnoform under the direct supervision of a specialist in that line? To be sure, we were all in the amphitheater many times when a patient was being anesthetized, or we waited there until he was brought in on the operating table—the scene presented being very pleasant—but we might have learned more, had we been back of the scenes.

Why is not every advanced student made to administer the anesthetic himself, watch the changes that take place—the respiration and the normal or abnormal condition of the pulse—before he is out of school, and feels that he has no one upon whom to depend?

He will gain confidence in himself in the right way if under the special direction of a proficient instructor, during his first experiences.

Are we not more highly respected by the medical profession and by the laity as well, if we demonstrate that we are proficient in this line as well as in mechanical operations?

One of the recent discoveries in anesthesia, that of somnoform, given us by Dr. George Rolland, Dean of the Bordeaux Dental School, is especially adapted to dental operations. "He sought an anesthetic which would enter, dwell in, and leave the body in the same way that oxygen does; which should be safer and more agreeable in its effects than any other known anesthetic; which should induce anes-

Read at meeting of the Texas State Dental Association, San Antonio June, 1907.

thesia quickly, afford a considerable operating period, and avoid all clumsy and cumbersome apparatus."

The great number of administrations, experimental and otherwise, have proved beyond doubt that this is the safest and most practical anesthetic known to the scientific world.

The method of administration is very simple—not so simple, however, that it may be used in a careless and negligent manner, for no dentist or physician regardful of the welfare of his patients and the upbuilding of his profession, would use any anesthetic without any thoughtful preparation.

"While the number of deaths ascribed to any anesthetic may mean much or little, according to the circumstances under which these deaths occurred, it is certain that no other anesthetic in general use ever had so few deaths laid at its door as somnoform. Thus far in its history there have been approximately one million administrations. The patients have ranged in age from two years to more than eighty years; the condition of general health has varied from that of the robust man to the patient on the operating table so affected that all other anesthetics were contra-indicated. In ninetynine per cent of the cases there has been no previous examination to know the physical condition, and no restriction as to the meals previous to the administration. The severity of the operation has ranged from the excavation of the sensitive cavity to that of a surgical operation of thirty minutes' duration; thousands of the earlier administrations were given without the proper inhalers; and the skill of the anesthetists has ranged from that of the man who knew nothing of anesthesia or anesthetics to the most skilled administrators. there have been only four authentic deaths during the administration of somnoform, but two in America, and these all seem to be deaths under anesthetic rather than deaths due to the anesthetic! These statistics are quoted from reliable authority.

Before attempting the administration of somnoform, the dentist should place the patient comfortably in the chair, preferably, though not necessarily, in a reclining position, with feet comfortable on the foot-rest, without being crossed.

The clothing should be loose and the breathing unobstructed.

It is of the utmost importance that the patient should inhale deeply yet naturally, breathing through the mouth, as the pungent

odor of the drug is less irritating to the mucous membrane of the throat than to that of the nasal passage.

Many persons do not know how to breathe; others are afraid. The patient should be shown how to breathe, then made to take three or four deep inhalations before the drug is placed in the inhaler. Having breathed correctly just before, he will be more likely to do so, and naturally, once the inhaler is applied. Besides this, the most important of all, having thus absorbed a considerable quantity of air just before the mask was applied, the patient will need very little more during the period of induction.

It is the natural tendency of the young practitioner to begin the operation before complete anesthetization has been accomplished; thus the small amount of the drug which has been absorbed has spent its force before the work undertaken can be finished.

As in the case of other anesthetics, such as chloroform, ether and gas, the same amount of somnoform is not required in every administration, some operations being more prolonged, while others require but a small amount for their completion.

The average patient will be thoroughly anesthetized by the use of a three cubic centimeter tube, while others will require as much as a five cubic centimeter tube.

I was surprised not long ago to find it necessary to use five tubes for a patient for the removal of an impacted third molar, but learned later that he had just had a hypodermic of morphine. During the period of induction I observed no systemic disturbance other than an increased pulse rate. This became normal immediately after consciousness was regained.

If the patient is being anesthetized for the first time he is likely either to be nervous or frightened. Here, experience has taught me not to be in a hurry in administering the drug, for I find the patient does better if he has plenty of time and if his confidence is gained. When his mental fears have been allayed, more than half the battle is won. The amount of self-control he exerts will be very largely determined by the amount of confidence the operator is able to inspire. Nothing else will so quickly and effectually allay the patient's fears as to find that the operator knows exactly what he has to do and how to do it. Few things conduce more speedily to anesthesia than lulling the patient into as quiet a condition as possible, explain-

ing that patients who think of music or of pleasant scenes have pleasant dreams.

A lady who was in a very delicate state of health had been suffering for more than a week with an ulcerated tooth before coming to my office. The only possible relief in the case was in extraction, and her nerves were in such a condition that it was impossible to perform the operation without the use of an anesthetic. She insisted that she knew that the tooth must be extracted, but was positive that she would have nervous convulsions. I administered somnoform—the tooth was extracted—the woman had the nervous convulsions.

It is my belief that if she could have controlled herself and could have been induced to fix her mind upon a subject alien to her suffering and condition, there would have been no unpleasant results.

If, when the administration of somnoform has begun, the patient struggles, the inhaler should be left open until he absorbs enough of the drug to quiet him; then, if there is not sufficient left for anesthetization, it is easy enough to break another tube and accomplish the desired result.

Comparatively little attention need be paid to age. Somnoform has been successfully administered to children two years old; also to adults of eighty years.

In patients of advanced years, care should be taken to learn the condition of the blood vessel walls. Arterio-sclerosis increases the danger of a blood vessel rupture, especially in the brain.

The fat or full-blooded person needs more air in the early stages of inducing anesthesia than does the thin, anæmic person.

For the patient with the normally rapid pulse, anesthesia should be induced more slowly than for those showing weak hearts and poor circulation.

Elderly persons who show prominent veins in the neck and temples must be given the anesthetic gradually with plenty of air in the early stages. Timid and frightened patients must be humored to the extent of beginning administration slowly, giving but little somnoform at the start; such patients observe the progress of anesthesia very closely, and are usually at a high nervous tension, and a smothering sensation or any sudden increase of the heart's action by too strong a vapor must be avoided. In a few seconds such patients will be sufficiently anesthetized not to care, and administration may pro-

ceed as usual. These nervous, frightened patients cause the anesthetist more anxiety and are really more dangerous than the frail and delicate subjects who present pathological complications, but have no dread of anesthesia.

In recovery from the administration, the chief precaution should be to keep the patient perfectly quiet, in the same position, if it be possible, as that during the operation. Care should be used that no blood be swallowed, as nausea invariably results, and the spasmodic thrusting up of the diaphragm against the heart may cause symptoms of heart depression and fainting.

Few accidents have been recorded in the use of somnoform, yet it is well for the anesthetist to know what to do in any case, and to be prepared to do it.

There are but two conditions in the administration of somnoform that need give any alarm; suspended breathing and cessation of heart action. If the breathing ceases, the inhaler should be removed and the patient sharply struck upon the abdomen. This stirs up the solar plexus and is usually successful. If not, artificial respiration should be resorted to.

If the heart ceases to beat, one-twentieth or one-tenth grain of strychnia should be given hypodermically, or one-hundredth grain of nitro-glycerine. Adrenalin solution is one of the most powerful cardiac-vascular stimulants known. Eight or ten drops should be placed in the conjunctive sac in the inner corner of the eye. Artificial respiration should be continued until the patient gives a deep sigh and the circulation is established.

The profession of dentistry has become in recent years one so important that it is necessary for every dentist to understand anesthesia.

Since the results in the case of somnoform are so much safer and more pleasant than in that of chloroform, ether or nitrous oxide, it would appear advisable to suggest its use in all operations in dental surgery.—Practical Dental Surgery.



CLINIC OF THE G. V. BLACK DENTAL CLUB OF ST. PAUL, MINN.

Everything is being done to make the annual midwinter meeting of this club, which will be held on February 27-28, 1908, as interesting as possible.

Many of the members of the club will make gold foil fillings, while other members will make demonstrations with gold, showing various methods of casting tips and backings for teeth as well as inlays.

Dr. W. N. Murray will upon both days demonstrate the use of Dr. Taggart's casting machine.

Dr. J. O. Wells will demonstrate methods for casting Richmond crowns.

Dr. C. E. Woodbury, of Council Bluffs, Iowa, an authority on inlays, will demonstrate and read an essay on the value of using inlays.

Such well known operators at Drs. Searl, F. S. James, Wallace, Fawcett, Yerke, Gallagher, Conzett, Carlson, Moyer, W. D. James, Crandall, C. H. Robinson, Lewis, F. S. Robinson and others will make operations.

The essays, as in the past, will be one of the features of the meeting.

The program will be printed in the February number of this journal.

Everybody interested in the advance and progress of the dental profession is invited to meet with us and assist in making our coming clinic the best ever held.

For further information apply to R. B. Wilson, Secretary, American National Bank building, St. Paul, Minn.

THE ST. LOUIS SOCIETY OF DENTAL SCIENCE ANNUAL MEETING.

The St. Louis Society of Dental Science will hold its annual meeting at the Jefferson Hotel, 2:30 p. m., January 21, 1908.

Lecture on "The Life Work of Professor Miller," by Edward C. Kirk, D. D. S., Sc. D., Philadelphia.

Discussion opened by Dr. N. S. Hoff, Ann Arbor, Mich.; Dr. Louis P. Bethel, Columbus, Ohio.

The annual banquet will be given at 7 p. m. of the same day in honor of Prof. Edward C. Kirk, Dean of the Dental Department, University of Pennsylvania, and editor of The Dental Cosmos. The speakers will be Rev. Dr. Henry Stiles Bradley, pastor St. Johns M. E. church, St. Louis; Hon. Arthur W. Sager, Circuit Attorney, St. Louis; Dr. Louis P. Bethel, editor The Dental Summary, Columbus, Ohio; Dr. Neville S. Hoff, editor The Dental Register, Ann Arbor, Mich.; Dr. Chas. H. Darby, St. Joseph, Mo.; Dr. F. G. Worthley, associate editor The Western Dental Journal, Kansas City; Dr. W. L. Whipple, St. Louis, Mo.; Dr. Burton Lee Thorpe, associate editor The Dental Brief, St. Louis.

The profession are invited to attend both the lecture and banquet. For reservation for same and other information address Dr. Richard Summa, Oriel Building, St. Louis, Mo.

W. L. WHIPPLE,
E. E. HAVERSTICK,
HERMAN F. CASSELL,
Executive Committee.
D. O. M. LeCron,

President.

C. O. SIMPSON,

Secretary.

ALUMNI ASSOCIATION, CHICAGO COLLEGE.

The annual meeting of the Alumni Association of the Chicago College of Dental Surgery will be held in the College Building on Wednesday, January 15, 1908.

It is hoped that there will be a large attendance, especially of the graduates of the College.

Dr. T. L. Grisamore,

President.

Dr. H. C. Peisch, Secretary.

SOUTHERN TEXAS DENTAL ASSOCIATION.

The third annual meeting of the "Southwestern Texas Dental Association" was held in San Antonio, Tex., November 16, 1907, and the following officers were chosen: President, Julian Smith, D. D. S., Austin; vice-president, J. H. Graham, D. D. S., San Antonio; secretary-treasurer, F. W. Smith, D. D. S., Austin. The next meeting will be held in Austin, Tex., in February, 1908.

CHICAGO COLLEGE CLINIC.

The annual meeting of the Alumni Association of the Chicago College of Dental Surgery will be held in the college building on Wednesday, January 15, 1908. Dr. C. M. Wright, of Cincinnati, Ohio, will read a paper, and there is a long list of clinics. It is hoped that there will be a large attendance, especially of graduates of the college.

Dr. T. L. Grisamore,
President.
Dr. H. C. Peisch,
Secretary.



SENSITIVE DENTIN.

The use of pressure with obtundents marks a new era in the treatment of sensitive dentin. Carbolic acid, chlorid of zinc or trichloracetic acid, in full strength solutions, applied to the desiccated and protected cavity, on a pledget of cotton wool, is covered over with a thick layer of unvulcanized rubber, and pressure applied by means of a flat-ended instrument for a minute or two, when an area of insensitive dentin will ordinarily be found to have been secured. A second application may be required at greater depth of excavation.—

Wm. Simms, the Dental Record.

ETHYL CHLORID.

There is a special field, I believe, for ethyl chlorid in cases of short operations upon persons who are not good subjects for nitrous oxid. As far as my own experience goes, it is in the cases of alcoholics of the muscular, high-colored, thick-necked men that ethyl chlorid is particularly valuable. In such cases, I believe, if the dose is properly regulated, it can be safely given in the sitting position.—

Dr. J. Blumfield, Dental Brief.

THE THIRD MOLAR.

The third molar can be best saved by the use of a combination cement and amalgam filling, working the amalgam into the soft cement, giving special care to the edges. The cement affords adhesion, avoids the use of deep undercuts and lessens the susceptibility to thermal changes. Over the deep-seated portions be sure to place a thin gutta percha layer, as the oxyphosphate is liable to be irritating. I put in many of these fillings, not to avoid expense, but because I know it is best adapted to the case.—John A. Schmidt, Dental Cosmos.

CONTROLLING HYPERSENSITIVE PALATE WHEN TAKING IMPRESSIONS.

In a case where no one had been able to get impressions, the throat and palate being so sensitive, impressions were taken with no unpleasant symptoms whatever after the following treatment: Three powders of chloretone, each containing five grains, were given to the patient with instructions to take one upon getting up in the morning; another two hours later, eating a very light breakfast; the third after breakfast, before reporting at the office. Two grains were then given at the time of taking the impressions.—A. E. Franklin, Dental Register.

OFFICE BUILDING FOR PHYSICIANS AND DENTISTS.

Prominent physicians and dentists of Indianapolis have completed arrangements for the incorporation of a stock company to erect a handsome office building at a cost of \$100,000. It will be owned, operated and occupied by members of the stock company. The building will be five stories high, with exterior of white terra cotta. Care will be taken to make it strictly fireproof and thoroughly modern. The first floor will be occupied by a drug store, a surgical instrument salesroom and clubrooms for the physicians and dentists having offices in the building. In the basement will be a Turkish bath establishment, a barber shop and a medical gymnasium.—Indianapolis News.

NAUSEA.

To relieve nausea in the chair, caused by the rubber dam, etc., phenol-sodique is recommended. Dilute one teaspoonful in about half a glass of water and have the patient take a swallow; repeat in ten or fifteen minutes, if need be.—Brief.

JUST APPRECIATION OF SERVICES RENDERED.

The editor just received the enclosed letter, which speaks for itself: Dear Doctor: It gives me great pleasure to endorse you as an adept in the science of relieving pain and much swelling in the mouth and pocketbook. When I just started your treatments my face was swollen and I could not close my pocketbook. After twelve or fourteen months of said treatment, both troubles have been removed. Yours for another treatment.—W. H. B., Dentists' Magazine.

CEMENT FILLINGS: CONTACT POINT.

Clinical evidence indicates that a cement filling in any occluso-proximal cavity should have a much larger contact surface presented to the adjoining tooth than merely a buckling point of contact. The cement should be packed firmly directly against the proximal surface of the adjoining tooth, and in finishing an interdental space created at the cervical third only. After a few hours, floss silk can be carried through to the cervical space and withdrawn laterally, and food will not be forced against the gum septa for a series of years if the cement has been mixed properly stiff.—W. V.-B. Ames, Dental Summary.

STRENGTH OF PORCELAIN.

When porcelain is closely imbedded in the cement it is almost impossible to break the edge without first wearing away the cement. I believe it has more strength in that way than any other substance. You can take a crystal from your watch and break it in your fingers, but when it is embedded in cement as an inlay is, you can stand on it with your full weight, and not break it.—Dr. C. F. Rodolph, Review.

DO NOT VARNISH INLAYS AFTER SETTING.

The varnishing of an inlay after setting, for the purpose of keeping the moisture from the cement, by almost all inlay workers has proven incorrect. The cements that are used today in setting inlays are what are called hydraulic cements. We have better success with those cements, for after a proper crystallization has taken place the moisture is immediately allowed to flow over.—W. H. Cudworth, Review.



Street-Moore.—Dr. C. A. Street and Miss Ellen Moore, both of Chicago, were married December 3.

Frowine-Von Kanel.—Dr. Ed Frowine and Miss Von Kanel, both of Bowling Green, Ohio, were married November 26.

Bevan-Lonegran.—Dr. J. A. Bevan of Kankakee, Ill., and Anna Margaret Lonegran of Woodland Park will be married January 10.

From the Dental Chair to the Pulpit.—Dr. W. C. Sensibaugh of East Moline, Ill., will give up the practice of dentistry to enter the ministry.

Fire.—Dr. A. B. Brown at Lake City, Fla., suffered a loss of \$350 damage through fire, which consumed the building in which his office was located.

Dentist on the Creek.—Dr. J. A. L. Rhea of Chambers, Tenn., was doing some dental work on the Creek last week, according to the Bristol (Tenn.) Currier.

Dentist a Wife-Beater.—A dentist in Chicago has been sued by his wife, who complains that the dentist sought to teach her obedience by means of a leather belt.

Dentist Suffers Stroke of Paralysis.—Dr. J. A. Stipp, a dentist in Toledo, Ohio, was found unconscious in his bed in a critical condition as a result of a stroke of paralysis.

Fined for Illegal Practice.—A dentist at Columbus, Ohio, was arrested for illegal practice at the instance of Dr. H. C. Brown, secretary of the State Dental Board, November 22.

Fire.—A fire at Tupper Lake, N. Y., November 18, destroyed the building of Dr. N. F. Foote, used for a dental office. The total loss was \$3,000, on building, dental supplies and household goods.

Calumet Dental Society.—The Calumet Dental Society organized December 14 at Gary, Ind. Dr. J. D. Long was elected president; Dr. B. S. Gardner, vice-president, and Dr. George W. Winslow, secretary and treasurer.

Change in Idaho Dental Board.—Dr. J. D. Burns of Payette, Idaho, has been appointed by the state board to fill the vacancy made by the resignation of Dr. S. A. Mulkey of Hailey, who has moved to the State of Oregon.

Fox River Dental Society.—The Fox River Dental Society held a meeting December 17 at Aurora, Ill., and elected the following officers for the ensuing year: Dr. C. T. Dahlin of Elgin, president; Dr. J. G. Turner of Aurora, vice-president, and Dr. E. B. George of Geneva, secretary and treasurer.

Oklahoma's New State Board.—The Dental Board of the State of Oklahoma was organized November 24 and the following officers were elected for the ensuing year: Dr. W. W. Bryan of Clairemore, president; Dr. A. C. Hixon of Guthrie, secretary, and Dr. Fred Sides, treasurer. The board will hold a session in Muskogee January 28 to 30.

Celebrates the Fiftieth Anniversary of His Dental Practice.—Dr. W. T. Magill of Rock Island celebrated the fiftieth year of his dental practice recently. A number of the state and county dentists were present and the doctor received many telegrams of congratulations from men all over the state. A leather rocker was presented to him in memory of the event.

American Dental Degree Reorganized in Germany.—After a ten years' fight on degrees conferred by American dental schools, the organized dentists of Germany have met their Waterloo, the imperial courts having decided that the American college title of "doctor of dental surgery" is legal in the fatherland when conferred by a reputable American institution.

Colorado Dental Society.—At a meeting of the Washington Society of Colorado Dentists, held November 24, the following officers were elected: Dr. A. J. Gwathney, president; Dr. C. S. Wormley, vice-president; Dr. C. C. Fry, secretary; Dr. J. R. Francis, Jr., corresponding secretary; Dr. G. H. Butcher, financial secretary; Dr. C. A. Gray, treasurer; Dr. W. E. Hamilton, librarian.

Ohio Dental Society.—The Ohio Dental Society met at Columbus, December 3, 4 and 5. The following officers were elected for the ensuing year: Dr. G. I. Keely of Hamilton, president; Dr. W. A. Whitslar of Cleveland, first vice-president; Dr. M. H. Pletcher of Cincinnati, second vice-president; Dr. T. R. Chapman of Columbus, secretary and Dr. W. A. Price of Cleveland, treasurer.

Honors the Memory of Dr. Miller.—A memorial meeting was held at the Berlin University in honor of the late Willoughby Dayton Miller, the American dental surgeon, who had been a professor of the university for twenty-two years. A year ago Professor Miller resigned to accept a position with the University of Michigan, but he died at Alexandria, Ohio, of an operation before beginning his new duties.

Dr. Charles A. Meeker Honored.—Dr. Charles A. Meeker of Newark, N. J., was the guest of honor at a banquet in the Waldorf-Astoria, New York City, on Saturday, January 11, when dentists from many parts of the country assembled around the board. The dinner committee consists of Dr. W. W. Walker, chairman, of New York City; Dr. Herbert S. Sutphen of Newark, and Dr. B. F. Luckey of Paterson, together with 103 other members of the profession, of whom forty reside in New Jersey.

Report of Children's Aid Society.—The Children's Aid Society in New York City has reported for the first four months of clinic work in one of the industrial schools in that city that in the 394 children examined all required dental work of some kind, over 1,200 cavities were discovered and it was found necessary to extract 214 teeth. It is said that the effect of the work on the standard of health in the school is noticeable.

Settlement of Dr. Thomas W. Evans Estate.—After litigation extending over ten years, the estate of Dr. Thomas W. Evans, the famous Philadelphia dentist who died in Paris, where he became a millionaire, finally has been adjusted in the courts of Philadelphia, New York and Paris. All the papers in the case, including the signatures of the fifty-three heirs to a release of their claims against the legacy to the "Dr. Thomas W. Evans Museum and Institute Society" were received by attorneys for the society. As a result the society immediately will come into possession of property in New York worth more than \$1,000,000 and property in Philadelphia valued at \$100,000. The residue of the estate, in Paris, worth about \$800,000, will be distributed among the heirs.

NECROLOGICAL.

- Dr. W. W. Monroe, a dentist at Parkersburg, W. Va., died December 10th.
- Dr. I. T. Davis, a dentist at Atlanta, Ga., died November 24th. He was 32 years of age.
- Dr. J. B. Van Fossen, a dentist at Ypsilanti, Mich., died November 28th. He was 47 years of age.
- Dr. C. W. Evans, a dentist at Nashville, Tenn., died of paralysis October 16. He was 58 years of age.
- Dr. Oscar Brasfield, a dentist at Trezevant, Tenn., died of typhoid fever November 23d. He was 32 years of age.
- Dr. R. B. Donaldson, a dentist at Washington, D. C., died of acute indigestion November 23d. He was 81 years of age.
- **Dr. E. M. Cundall,** a dentist at Washington, Pa., died December 9 from acute liver trouble. He was a graduate of Jeffersor. Medical College of Philadelphia.
- Mr. John R. B. Ransom and Mr. Thaddeus F. Randolph, members of the firm of Ransom & Randolph, Toledo, Ohio, are both dead. Mr. Ransom died in San Francisco December 17th and Mr. Randolph in Toledo December 20th. They had been partners for many years.

Removals.—Drs. A. Mathews, from Virginia Beach to Asheville, N. C.; S. R. Moyer, from Barry, Ill., to Decatur; C. E. Overholt, from Eaton, Ohio, to Findlay; H. A. Austin, from Centerville, S. D., to Wakonda, S. D.; F. M. Willis, from Ithaca, N. Y., to Williston, S. C.; Bell, from Fond du Lac, Wis., to Chippewa Falls; R. T. McClurg, from Peoria, Ill., to Washington, Ill.; C. N. Weyer, from Sleepy Eye, Minn., to Mankato, Minn.; George S. Waldo, from Washingto, D. C., to Jacksonville, Fla.; J. H. Robinson, from Peoria, Ill., to Hoopeston; P. W. Miller, from Hoopeston, Ill., to Fisher; W. W. Wilson, from Richmond, Ind., to Chattanooga, Tenn.



Fig. 1.

871,430. Artificial Tooth—Joseph Morris, North Wales, Pa., assignor to the Dental Protective Supply Company of the United States, Chicago, Ill., a corporation of Illinois. Filed September 15, 1905. Serial No. 278,611.—An artificial tooth comprising a body of porcelain, a backing of composition material containing a metal oxid, and one or more fastening devices embedded in said composition material, substantially as described.

Fig. 2.

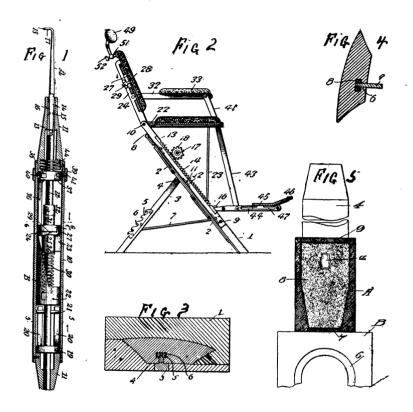
870,825. Angle Attachment for Dental Hand-pieces—James F. Hardy, New York, N. Y., assignor to Consolidated Dental Manufacturing Company, New York, N. Y., a corporation of New York. Filed August 29, 1906. Serial No. 332,440.—The combination with suitable tool supporting machanism and tool driving mechanism, of a tool retaining dog seated on said support to be moved toward and away from the tool along the tool support, said dog having an integral spring portion at its free end in position to engage the tool support to hold the locking dog in locking adjustment.

Fig. 3.

870,824. Hand-piece for Dental Engines—James F. Hardy, New York, N. Y., assignor to Consolidated Dental Manufacturing Company, New York, N. Y., a corporation of New York. Filed March 9, 1906. Serial No. 305,055.—In a dental hand-piece, the combination with a rotary spindle, a casing inclosing the spindle consisting of telescoping sections, the spindle having an extended bearing centrally along one of said casing sections and the other casing section being removable over the tool carrying end of the spindle.

Fig. 4.

871,400. Combination Dental Bracket—George Hall, Lima, Ohio. Filed January 18, 1906. Serial No. 296,608.—A dental bracket comprising a base, a vertical hollow frame member pivoted thereto capable of lateral swinging movement, horizontal parallel frame arms having their ends engaged in the hollow vertical member and bolts passing through said



vertical member to secure the arms therein, the outer ends of the frame arms terminating in a hollow box.

Fig. 5.

870,909. Dental Articulator—George B. Snow, Buffalo, N. Y. Filed August 8, 1906. Serial No. 329,691.—A dental articulator comprising upper and lower sections, joint pins in the lower section, slotted links interposed between the two sections to complete the joints, and gripping sockets in the upper section into which said links are journaled.

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